What is Claimed Is:

1. A method for finding the position of a subscriber in a radio communications system, comprising:

combining transmission signals from subscribers to form a transmission sum signal, which is passed by cables from a base station to at least two antenna devices for transmission;

combining received signals which are received from respective subscribers via the at least two antenna devices,, the received signals being combined to form a received sum signal, which is passed by cables to the base station;

associating each individual antenna device with an individual area for radio communication with subscribers within the area;

individually choosing cable lengths, which are used for signal transmission, for each antenna device;

measuring a round trip delay time for the transmission signal and the received signal of a sought subscriber using the individually chosen cable lengths;

determining which antenna device originated the received signal of the sought subscriber based on the round trip delay time; and

determining the position of the sought subscriber to be the area associated with the antenna device which originated the received signal.

2. The method as claimed in claim 1, wherein the cable lengths are provided by an optical connecting cable.

3. The method as claimed in claim 1, wherein the cable lengths are provided by a glass fiber cable.

4. The method as claimed in claim 1, wherein the cable lengths are chosen to have cable length differences Δ between cables associated with adjacent antenna devices, and wherein the cable length differences Δ are determined using the formulae:

$$\Delta = LNG(i+1) - LNG(i) \geq Const, \text{ where}$$

$$Const = r*v/c$$

where:

i is a sequential variable to identify a cable length LNG which is associated with an i-th antenna device,

r is the range of radio communication for an individual antenna device,

v = 2*10E8 m/s is the glass fiber group velocity, and

c = 3*10E8 m/s is the group velocity in air.

5. The method as claimed in claim 1, wherein
the radio communications system is an indoor radio communications system, and
each antenna device is associated with an individual building area.

6. The method as claimed in claim 1, wherein the transmission signals and the reception signals are combined with a common connecting cable.

7. The method as claimed in claim 4, wherein
the radio communications system is an indoor radio communications system, and
each antenna device is associated with an individual building area.

8. The method as claimed in claim 7, wherein the transmission signals and the reception signals are combined with a common connecting cable.

9. A method for finding the position of a subscriber in a radio communications system, comprising:

combining transmission signals from subscribers to form a transmission sum signal, which is passed by cables from a base station to at least two antenna devices for transmission;

combining received signals which are received from respective subscribers via the at least two antenna devices, the received signals being combined to form a received sum signal, which is passed by cables to the base station;

associating each individual antenna device with an individual area for radio communication with subscribers within the area,

using different cable lengths for cables of different antenna devices;

determining delay time differences between different cables for the received signal of a sought subscriber;

determining which antenna device originated the received signal of the sought subscriber based on the delay time differences; and

identifying the position of the sought subscriber as the area associated with the antenna device which originated the received signal.